

On some Mammals from Engano Island, West of Sumatra: by OLDFIELD THOMAS,
British Museum.

By the kindness of the Marquis G. Doria I have been entrusted with the examination of a small collection of mammals, chiefly bats, obtained by the well known and successful explorer Dr. E. Modigliani in the little island of Engano, west of Sumatra, the birds and reptiles of which have been already worked out by Salvadori (1) and Vinciguerra (2). In view of the interesting discussions of these authors on the relations of the Engano Fauna, it is unfortunate that the mammals, usually so helpful in this respect, are not of a nature to throw much light on the subject, being for the most part very widely distributed Malayan forms. The new *Pteropus* however, on whose discovery Dr. Modigliani is to be congratulated, confirms the interesting relationship already pointed out as existing between Engano and the Andamans and Nicobars on the north, and Christmas Island on the south, as it just connects species found in these islands, while no allied form is as yet known to occur in Sumatra.

1. ***Paradoxurus hermaphroditus***, Pall.

a. Pulo Dua, July 1891.

Dr. Modigliani states that this is the only Carnivore found in the island.

This individual presents the interesting peculiarity of having five right lower premolars, an extra tooth, smaller than $\overline{p^4}$ and larger than $\overline{p^3}$, being inserted between these two teeth.

(1) Ann. Mus. Civ. Genov. (2) XII, p. 123. 1892.

(2) T. cit. p. 517.

The others premolars are in consequence crushed together and twisted round obliquely, and also those that appear to correspond to $\overline{p^2}$ and $\overline{p^4}$ are slightly broader and shorter than what I suppose to be their fellows of the opposite side.

2. **Pteropus hypomelanus**, Temm.

a. ♂. Pulo Dua, July 1891.

b-c. ♀ and young. Kifa-juc, May 1891.

d. imm. ♀. Malaconni, June 1891.

3. **Pteropus modiglianii**, sp. n.

a-b. ♂. Kifa-juc, May 1891; ♀. Bua-Bua, June 1891.

Of small medium size, black or blackish in both sexes.

Fur crisp and woolly throughout; that of the neck decidedly more so than that elsewhere; that on the back scarcely adpressed. Muzzle broad and flat, lips unusually full and distensible. Ears of medium length, about equal to the muzzle; laid forward their tip falls about 5 mm. short of the posterior canthus of the eye; their inner margin evenly convex; tip pointed but not acutely so; upper third of outer margin flattened, remainder convex. Insertion of wings on back at narrowest point about an inch apart in male co-type, barely half an inch in female; breadth of dorsal fur in same region about two inches in both. Interfemoral membrane narrow in the centre, partially concealed by the fur. Upper surface of humerus and forearm almost, and the remainder of the upper surface of the wings wholly, naked. Femur thickly haired above, but tibia quite naked, although, just inward of the latter the proximal half of the interfemoral membrane is well clothed half way to the ankles. Beneath, the wing membrane is more fully haired, there being numerous fine scattered hairs all over the antibrachial membrane, on that between the humerus and femur, and on that outside, the proximal half of the forearm for the breadth of an inch; on the other hand the interfemoral is entirely naked below.

Colour. Blackish brown throughout, without any sharp colour contrasts, but while the head and neck are absolutely black, the body becomes gradually a dark chestnut colour which reaches its maximum of brightness on the rump; even there however

it is of an exceedingly sombre tone. In colour therefore *Pt. modiglianii* in the two sexes closely resembles the black Andaman females referred by Dobson to *Pt. nicobaricus*.

Skull not dissimilar in size and general proportions to that of *Pt. hypomelanus*, but, correlated with the greater breadth of the mouth and distensibility of the lips, all the lateral teeth are more splayed outwards, so that a greater portion of them are visible outside the bony muzzle, in the dorsal view of the skull. Orbits not completed behind. Anterior premolar minute or absent; last upper molar rounded-triangular, rather larger than the last lower molar, which latter is evenly oval and about equal in size to the round anterior premolar. Inner lower incisors about one third the area in cross section of the outer ones. Premolars and molars smooth, without prominent secondary cusps or projections.

Dimensions, in spirit:

	♂	♀		♂	♀
Head and body	200	196	Thumb, without		
Head	71	—	claws	50	51
Muzzle to eye.	27	—	Lower leg . . .	67	65
Ear	28	27	Hind-foot with-		
Forearm.	141	135	out claws. . .	37.5	39
	(=5.5 inch.) (=5.3 inch.)				

Skull. (♀). Basal length 56; greatest breadth 32.5; tip of nasals to supraorbital foramina 26.2; interorbital breadth 8.8; intertemporal breadth 8; breadth of brain-case 31.7; palate length 35.5; upper canine, cingulum to tip (behind) 7.2; horizontal length of $\overline{p^3}$ 4.3; $\overline{p^4}$ 4.7, $\overline{m^1}$ 5.6, $\overline{m^2}$ 2.4; $\overline{p^4}$ 4.5, $\overline{m^1}$ 4.8, $\overline{m^3}$ 2.2; front of \overline{c} to back of $\overline{m^2}$ 24; front of \overline{c} to back of $\overline{m^3}$ 27.

This sombre and dull coloured fruit-bat is interesting as being in characters and size, as in geographical position, intermediate between the large *Pt. nicobaricus*, Zel. of the Andamans and Nicobars (or at least the black form of that species) and the far smaller *Pt. natalis*, Thos, of Christmas Island. The size of each of these being very constant in their respective habitats,

it is evident that the present species, of which the male and female before me are practically identical, should also have a name to designate its place in this series of similar species. In Dr. Modigliani's paper on Pulo Nias, an excellent account is given of the *Pt. nicobaricus* he found there, and he is to be congratulated on his discovery of the present interesting form.

4. **Xantharpyia amplexicaudata**, Geoffr.

a-h. 8 ad. and yg., all ♀ except 2 yg. Bua-Bua.

5. **Rhinolophus affinis**, Horsf.

a-e. 5 ♂ ♀. Kifa-juc.

f-i. 4 ♂ ♀. Bua-Bua.

6. **Hipposiderus diadema**, Geoffr.

a-b. ♂ ♀. Kifa-juc.

7. **Hipposiderus galeritus**, Cant.

a-b. ♂ ♀. Bua-Bua.

c-d. ♂ ♀. Malacconi.

It appears to me very doubtful whether this and *H. cervinus*, Gould, are really distinguishable species, the differences mentioned by Dobson seeming to disappear on the examination of a larger series.

8. **Hipposiderus bicolor**, Temm.

a-b. 2 ♂. Bua-Bua.

These specimens are rather larger than usual, their forearms measuring respectively 47 and 45 mm.

9. **Vesperugo imbricatus**, Horsf.

a. ♀. Kifa-juc, May 1891.

Forearm 32 mm.

This specimen is of considerable interest in connection with Dr. Modigliani's remarks on the relationship of *V. macrotis* to *V. imbricatus* (¹), and also owing to the fact that I am now able to make a direct comparison of a properly preserved spirit specimen with Horsfield actual type, this latter being in so hopeless a state of decay that the present is likely to be almost or quite the last examination which it will bear. This comparison

(¹) T. cit. p. 242.

convinces me without a shadow of doubt that the Engano bat, which will remain available to naturalists in the Museo Civico of Genoa, is the same in all essential respects as the Javan one, and I am glad to have this opportunity of recording the fact before the final disintegration of Horsfield's type. From *V. macrotis*, of which 3 specimens, one a topotype (¹) from near Padang, collected by Dr. Beccari, a second likewise from Sumatra, and a third from Pulo Nias, are also before me on loan from the same Museum, this Engano specimen only differs by having its wings brown, as in ordinary species of *Vesperugo*, while *V. macrotis*, as pointed out by Modigliani, has them white or whitish. In all other respects, in the shape of the ears, in the broad sub-crenate form of the tragus, in the remarkable shortness and breadth of the muzzle, and in the proportions of the teeth, the two agree perfectly, and it is probable that the colour of the wings is a character on which but little stress can be laid. In fact even among the small series above mentioned there is some variation, the second Sumatran one having wings but little paler than the general body colour.

Under these circumstances it would appear to be best to consider, as Dobson did, *V. macrotis* as a synonym of *V. imbricatus*; should however the colour of the wings prove of sufficient constancy to necessitate the separation of the two, *V. macrotis* will be the name for the white-winged Sumatran and Nias form, and *V. imbricatus* for the brown-winged one from Java and Engano.

10. **Emballonura semicaudata**, Peale.

a-d. 4 ♂ ♀. Bua-Bua.

e. ♂. Malaconni.

11. **Mus rattus**, L. var.

a. ♀. Pulo Dua, July 1891.

Mammæ 3 — 3 = 12.

(¹) See P. Z. S. 1893, p. 241.

12. **Mus** sp.

a-b. 2 ♂ young.

Too young for determination, but apparently not the same as the last species.
